Health Science Pathway

Module 10: Interpreting Tables and Graphs

This example relates to the graph above showing the relationship between the number of hours of exercise per week and resting heart rate. Given that the trendline is given by the equation:

$$y = -4x + 79$$

An alternative presentation of the equation could be:

$RHR = -4*(Ex) +79$ because is appropriate to use symbols that relate to the variables in question as opposed to always using symbols x and y. Therefore you will notice that the equation has been rewritten in terms of RHR (resting heart rate) and Ex (weekly exercise). This particular form of the equation is in the context of a calculation performed using an Excel spreadsheet)

1. What is the resting heart rate if you perform no exercise?
2. What is the resting heart rate if you perform 4 hours of exercise?
3. What is the resting heart rate if you perform 10 hours of exercise?
4. How much does my resting heart rate change if I do one more hour of exercise per week?

Answer:

1. RHR = 79 BPM
2. RHR = -4(4) + 79 = -16 + 79 = 63 BPM
3. RHR = -4(10) + 79 = -40 + 79 = 39 BPM
4. Change in RHR per increment in Exercise = m = -4 BPM